

ABSTRACT

A miniature microscope objective includes at least three or four miniature lenses including from object to image at least a first positive lens, a second positive lens, and a third lens. The numerical aperture (NA) is greater than 0.4 and no more than approximately 0.9. The magnification variation $\Delta M/M$ over red, green and blue wavelengths spanning 165 nm or more is less than 0.3% to 1.5%, an image size variation is less than a sampling distance, at least one lens has an aspheric departure, and the miniature objective includes at least one diffractive surface.